

DON'T BE HOODWINKED





DON'T BE HOODWINKED

... ON YOUR

Air Conditioning

PROBLEM

Don't gamble on home comfort! The "shell game" is interesting diversion . . . when the stakes are not too high . . . guess wrong and one can guess again. But when buying heating equipment a wrong guess means a costly, uncomfortable mistake.

ARE YOU GUESSING?

Do you know what is actually under the "shells" of the elaborate and too-good-to-be-true stories about these so-called air conditioning installations? Air conditioning is a many-sided service. Do you know which part you need most? Do you know how important to your comfort are the different parts? Is the circulation of hot air at high velocities desirable? What makes the cleaning of air a necessity with some types of equipment, while with others this part of air conditioning is simply a needless expense? Will the air in your home need added moisture? Is the equipment of the type which will actually weaken the construction of your home?

TURN THE SHELLS OVER—THEN BET ON A SURE THING



Springtime

THROUGHOUT THE
YEAR . . . is a
PLEASANT THOUGHT



But . . . will “springtime weather” actually be supplied by the equipment so glowingly described? Consider, for a moment, what makes spring such an enjoyable season. Isn’t it because our bodies welcome the return of the sunshine? It is the radiant rays of the sun, with their health giving qualities, which make us like spring so well.

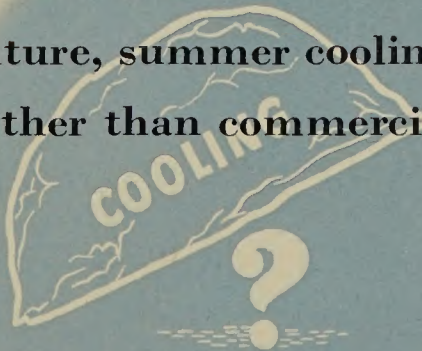
Therefore, be sure your air conditioning equipment provides **SUNRAY WARMTH** . . . if you wish to enjoy true springtime comfort during the long winter season.

DO YOU NEED COOLING?

Cooling is desirable for only about ten to thirty days of the year throughout the greater part of the country. But from early fall until late spring, our comfort and health are directly dependent upon satisfactory heating. Viewed in the light of this statement, it is apparent that air conditioning is chiefly a heating job.

Another question which should be considered is—“Can I afford cooling?” Whether the home is airtight, sufficiently insulated, exposed to the wind or protected, located in the North or South, surrounded by dry or damp atmosphere, . . . are but a few of the questions which should be considered.

Perhaps, sometime in the future, summer cooling may be practical for the home. Today it is far too costly for other than commercial purposes.





DON'T BUY A
"Pig in a Poke"

The "dramatization" of air conditioning has resulted in many instances of high-pressure salesmanship. Frequently these "dramatized" presentations are used to disguise the revival of the old-fashioned hot air heating system under the misleading term of "air conditioning."

Cleaning, humidification, ventilation, and circulation are overemphasized and the conditions necessitating the inclusion of cleaning and humidifying devices in the hot air equipment can be glossed over or not mentioned at all.

Consider ventilation and circulation. Ventilation is not required during the winter, unless the house is constructed "airtight." Normal construction provides "leakage" around the windows and doors. Also, ventilation is obtained by the opening and closing of doors and by open windows at night. Through these means the air is changed at least once per hour. Extra ventilation merely increases heating costs. Circulation is usually achieved in hot air equipment by fans which force the movement of air at high velocity, frequently accompanied by disquieting noise.

Radiator heating produces adequate circulation of air within a home with a gentle, slow movement.

Or consider cleaning. A hot air furnace is "open" at the floor and walls. It is actually a dirt receiver and a dirt transmitter. The air, being moved at high velocity, picks up the dust, lint, and dirt both from the upper floors and from the furnace room and scatters it over the furniture, draperies, and occupants of the home. Small wonder, too, the filters soon become clogged and have to be replaced two or three times during the season. Perhaps the latter result explains why filters are soon discarded.

A radiator heating system does not stir up dust, dirt, and lint. It's clean.

Why does humidification receive so much attention in the marketing of hot air furnaces? Lift the shell! It's because the air is blown over the intensely hot heating element of the furnace. It is "dried out" and sent as a stifling arid blast into the living quarters of the home. Even the best of humidifiers are unable to cope with this lack of moisture.

But, air in the home heated by radiators does not come in contact with extremely hot surfaces . . . it does not become "dried out" . . . it does not become a menace to health and to furnishings.

Don't be misled by a smokescreen called "Circulation—Cleaning—Humidification." BET ON A SURE THING.

VENTILATION
& CIRCULATION
?

CLEANING
?

HUMIDIFICATION
?

HEATING PROVIDES 80%

OF AIR CONDITIONING COMFORT

AND GUARDS AGAINST

THE RIGORS OF WINTER

All other functions of conditioning the air are of minor importance—when **PROPER HEATING** is provided to combat the howling, penetrating severity of the long heating season. Comfort is obtained only with **PROPER HEATING**; without it . . . “home life” is not endurable.

When blizzards blow . . . will all indoors be cozy . . . with permeating warmth? Comfort is assured when radiator heat at the window combats the intrusion of wintry blasts. Even the corners of rooms will be snug and warm.

But—**Don't Be Hoodwinked!**—in the selection of your heating system. Weigh thoroughly all factors—don't guess—when you point to the shell marked “Heating.” Be sure you select the one system—**Radiator Heating**—which provides the important 80% of air conditioning comfort . . . in a clean, healthful way . . . and does not scorch and dry out the air.

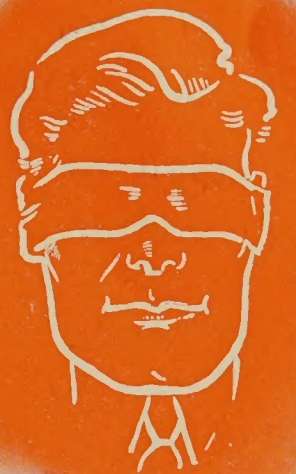
Be sure you know the difference between the “open” dressed-up, old-fashioned hot air system and the “closed” steam, vapor, or modern hot water radiator system.

Aside from the standpoint of comfort, you want your home to represent a sound investment. Since the heating system is such a vital part of it, your choice of equipment may mean the difference between an attractive and an unattractive investment from a buyer's viewpoint, in case you wish to sell your home later on. Ask yourself this question: “Have I ever heard anyone say that a radiator heating system is undesirable?” In fact, aren't homes with steam or hot water heat regarded as “better type” homes . . . more substantial . . . more comfortable and worth more money? Have you ever heard of anyone declining to buy a home because it was equipped with radiator heat?

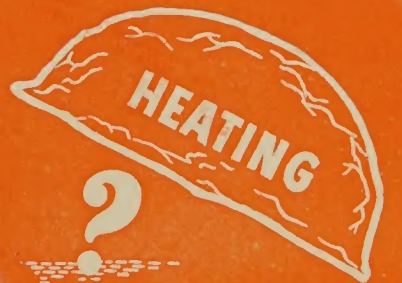
For your investment to be a desirable one, your home must be modern. The modern trend in heating is toward automatic operation. Gradual developments have been made for several decades toward practical and dependable mechanical operation of boiler and radiator systems. Even though you are not ready at this time, you may wish to change to automatic firing later. With a National Heat Extractor Boiler you can install the additional equipment at any time, whether it be an oil burner, stoker, or gas burner, and feel confident you will receive the utmost comfort and economy from this “armchair” control system. True automatic heating also includes the heating of domestic hot water for kitchen, bath, and laundry without the need of an extra heater or fuel. Only a radiator system can provide this dual service.

Investigate the following proofs of the advantages of the latter type of heating system.

DON'T BE



HOODWINKED

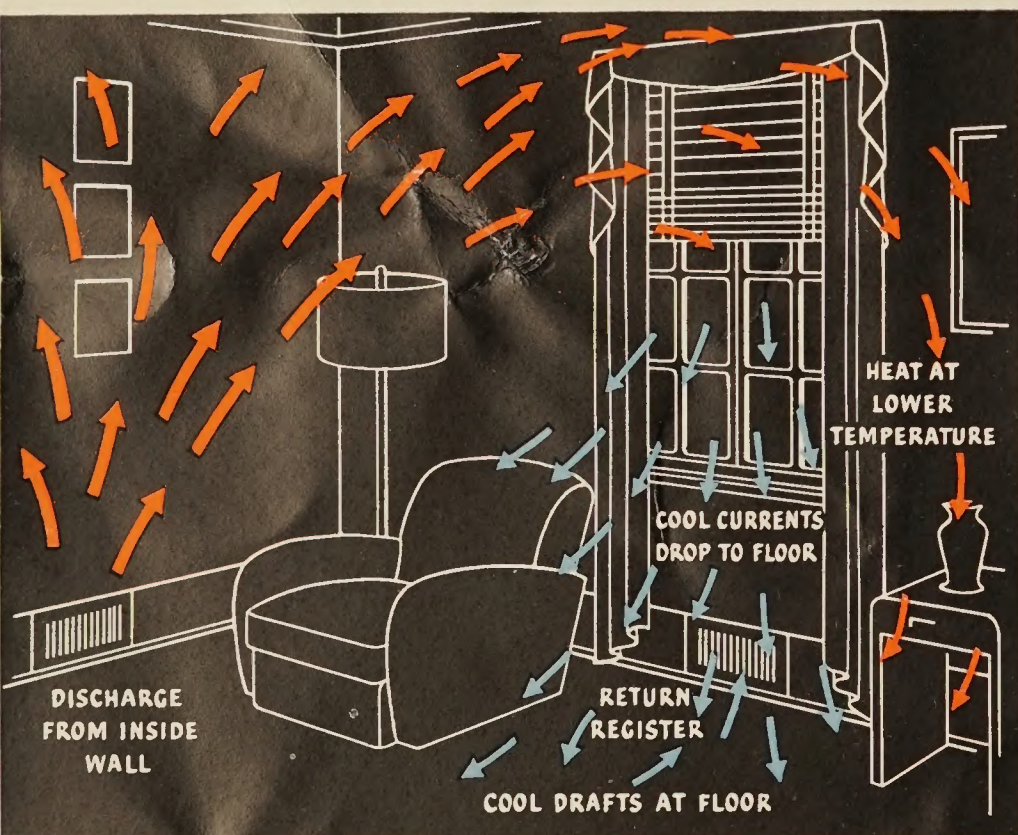


DON'T BE HOODWINKED

Compare!

Compare these radically different heating systems—the hot air system and the radiator system. In the former the air is drawn to the furnace and forced over the hot heating surface. Only a thin wall of metal separates the intensely hot fire from the air. The air is then forced through ducts to the discharge registers in the rooms. In the latter the heat generated in the boiler is transmitted to radiators in the rooms by means of steam or hot water. One system provides “circulated chill,” the other “circulated warmth.”

CIRCULATED CHILL



Placing radiator heat at the source of chilling discomfort is the only practical method of preventing drafts at sitting or floor levels. The cool air which leaks in around the window, as well as that cooled by the glass, is tempered by a blanket of ascending heated air at its most effective temperature. The warmed air then circulates to every portion of the room. In addition the radiant beams of direct heat add to one's comfort.

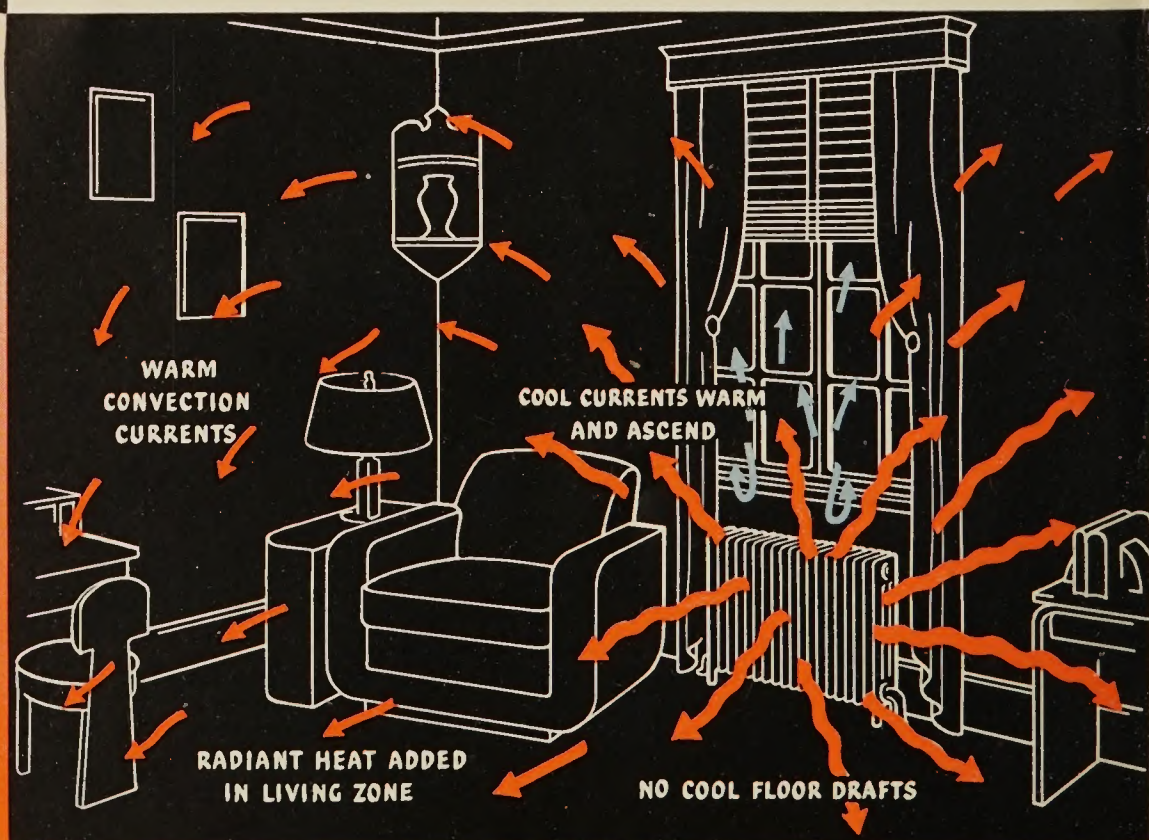


Bet on a sure thing!

How can such intensely hot air fail to provide comfort? Study the diagram at the left. The hot air leaving the inside wall register naturally rises to the ceiling. When it reaches the cold wall and window it has lost a part of its effectiveness. Becoming chilled, it sinks to the Living Zone and causes drafts and discomfort.

To raise the temperature of the air entering the room will not correct this undesirable condition. The relative difference in the temperature of the air from the register and that from the window is the cause of discomfort.

CIRCULATED WARMTH



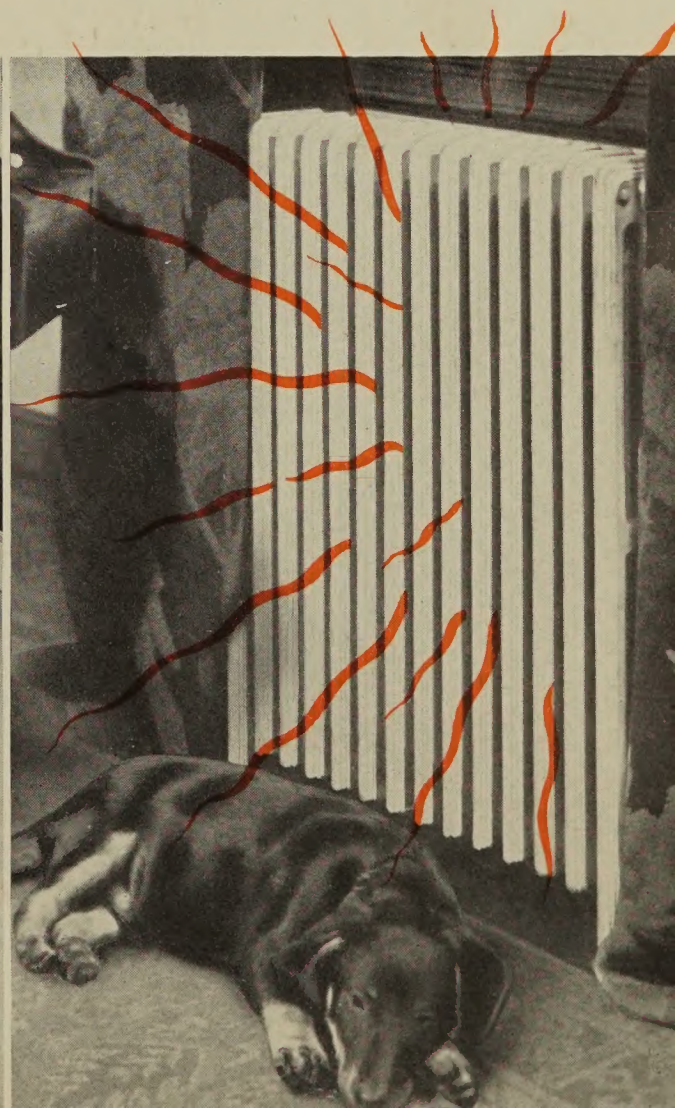
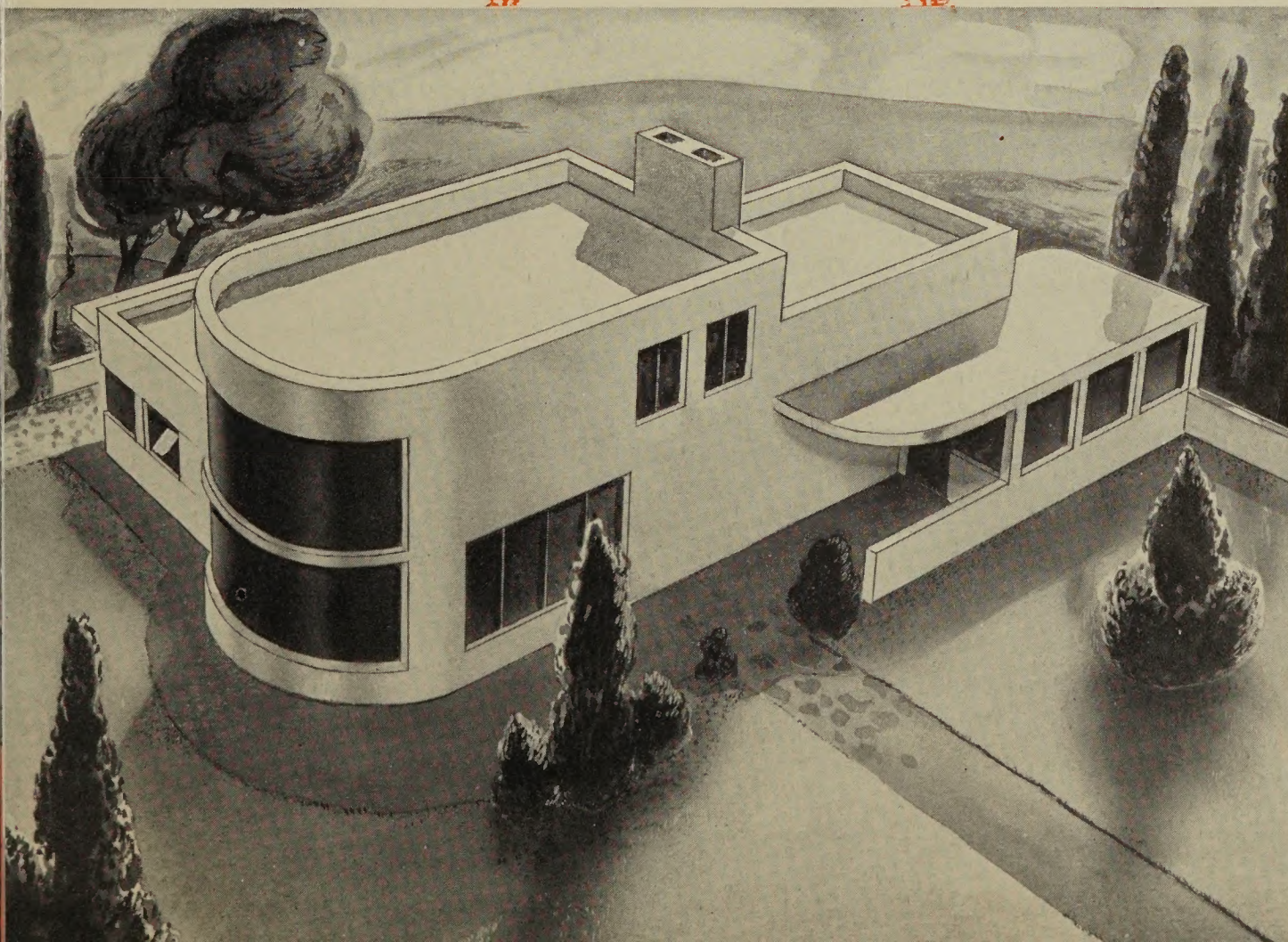
RADIATOR HEATING IS *Sun-like* HEATING . . .

Only radiator and convector heating is like the beneficial heat provided by nature. Radiator heat is confined sunlike warmth. It is the warmth that is available indoors, every day, whether the sun adds its glowing warmth or is hidden behind menacing clouds of Arctic snow.

Recall a warm day when you stood or sat in the shade of a tree. The air was warm, but do you remember when you moved from the shade to the direct exposure of the sun? You felt a greater intensity of heat from the direct sunrays. Only radiator heating gives that "extra" intensity of **SUNRAY WARMTH!**

Radiator heating has been man's most ingenious and effective method of providing continuous warmth indoors, when sun-heat is ineffective.

Sunray radiator heating directs comfort-rays to every part of a room. Whether the ceiling be high or low, the room long or wide . . . effective Living Zone comfort is assured with sunray radiator heating. Truly, you bet on a sure thing when you install radiator heating.





BE SURE OF *Positive Heating* IN THE LIVING ZONE

The Living Zone is that distance from the floor to a head-high level throughout all rooms. Comfortable warmth is essential in this zone but is particularly desirable when one is at rest in the "sitting zone."

Sunray radiator heating is positive heating because continuous radiant warmth is provided by each room radiator at the Living Zone level. There is no "on and off" period as with the hot air system using a fan or blower which operates intermittently.

This positive sunray warmth completely banishes drafts at the floor and at the neck. In fact, one is completely surrounded with warmth that can be thought of in no other way than "luxurious comfort." This "extra" sunray warmth is appreciated at all times but particularly when stepping from the shower . . . by the children playing on the floor . . . when in negligee early in the morning.



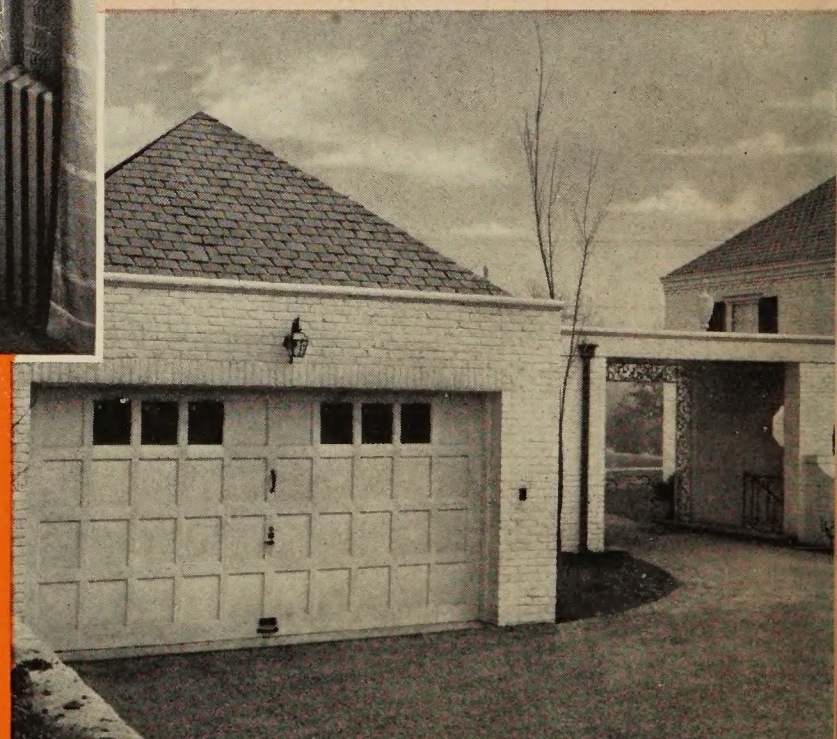
A warm glow greets the body.

It's safe to play on the floor.



What luxury! To be greeted in the morning by sunray comfort.

Radiator heat can be easily installed in the detached garage.





The ivory enclosures enhance the pleasing contrast between rough-textured paper and primavera wood paneling in this modern living room.

Hospitable warmth from an Art Radiator greets the guest in this reception hall.

The pleasing lines and color of the Art Radiator blend perfectly with the grey moire draperies in this 18th Century French bedroom.

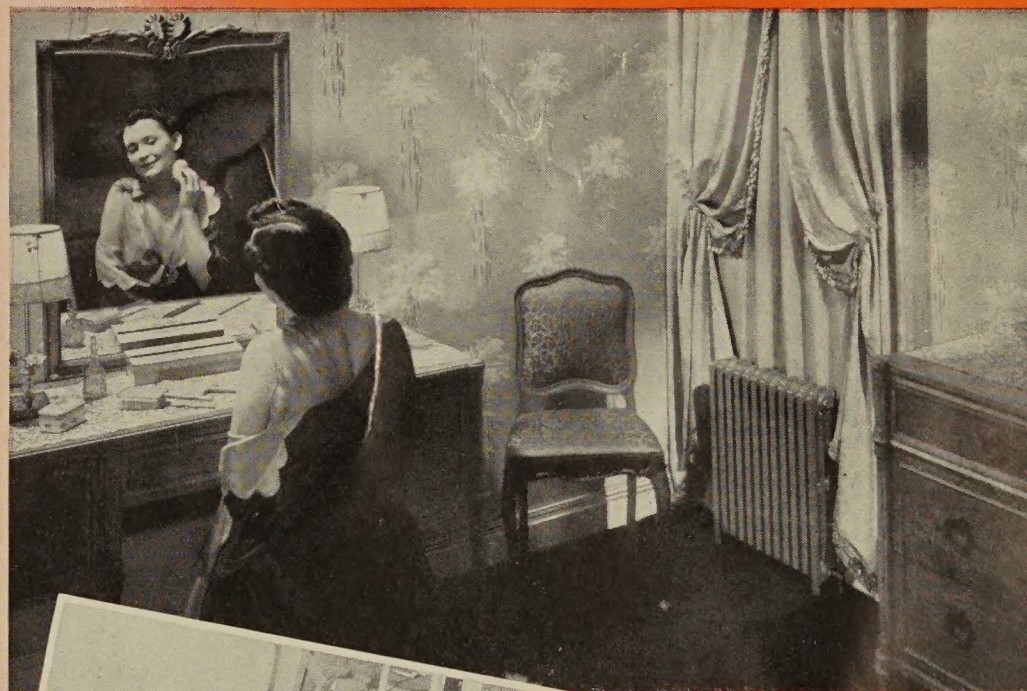
RADIATOR HEATING

IS *Positive Heating* FOR THE MODERN HOME

Modern radiators blend with the decorative details of modern homes. Whether the radiator is exposed . . . recessed under a window . . . concealed behind an enclosure . . . its beneficial warmth and positive heating serve in every room.

Radiators, because of window placement, do not require rearrangement of furniture at inside walls. A hot air discharge register is located in an inside wall and cannot be covered. Thus to permit heat to flow into the room without interference, it is often necessary to relocate a dresser or upholstered chair to a point less desirable.

A quick-starting automobile, on a cold, windy morning . . . starts the day without fussin', cussin', or delay! Whether the garage is in the basement, adjoins the kitchen, or is distant from the house . . . only radiator heating will reach every point and be safe heat.



The Aero Enclosure and Convector will supply needed warmth in the sickroom but no recirculation of air will occur.



RADIATOR HEAT *protects* YOUR HEALTH

Even temperature is maintained throughout the home, in the distant room as well as in the room directly over the boiler. Health is protected by the elimination of drafts at the floor and around the head and shoulders.

Should unfortunate illness confine one of your family—be free from worry regarding the “sick-room.” If warmth is necessary, radiator heating is positive and dependable. If a cool room is required, the radiator may be valved off. But, of greater importance, is the advantage of duct elimination with radiator heating. If the illness is of a contagious nature, germs will not be circulated. There are no register openings, with connecting ducts, to carry germs to other rooms.

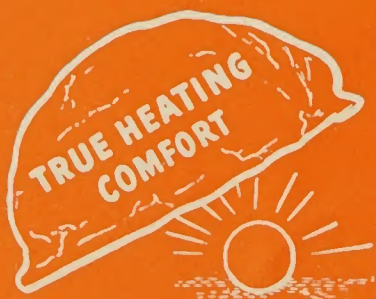
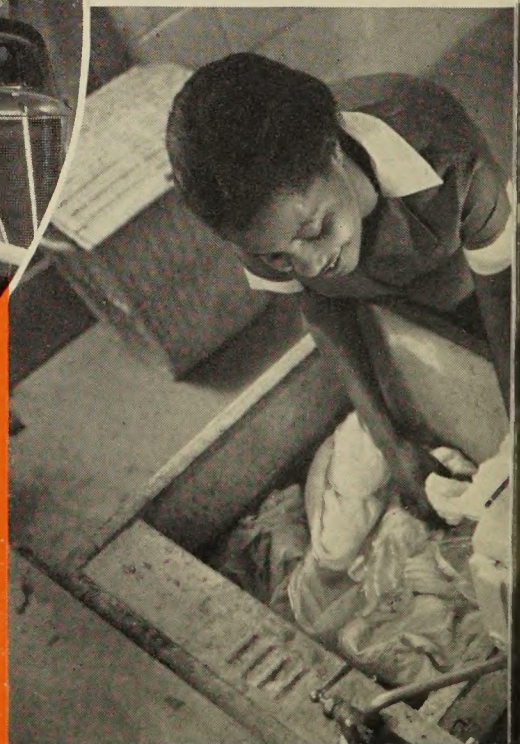
Certainly it is undesirable to draw odors from the kitchen . . . poisonous fumes from the garage . . . and bathroom air into the main air streams. Radiator heating, unlike other systems, is completely adaptable to the requirements of these rooms and does not recirculate odors to other parts of the house.



Steamy air and poisonous fumes will both be confined to their place of origin and not diffused throughout the home.



The laundress will be delighted when she discovers



provides a

PLENTIFUL SUPPLY

OF HOT WATER

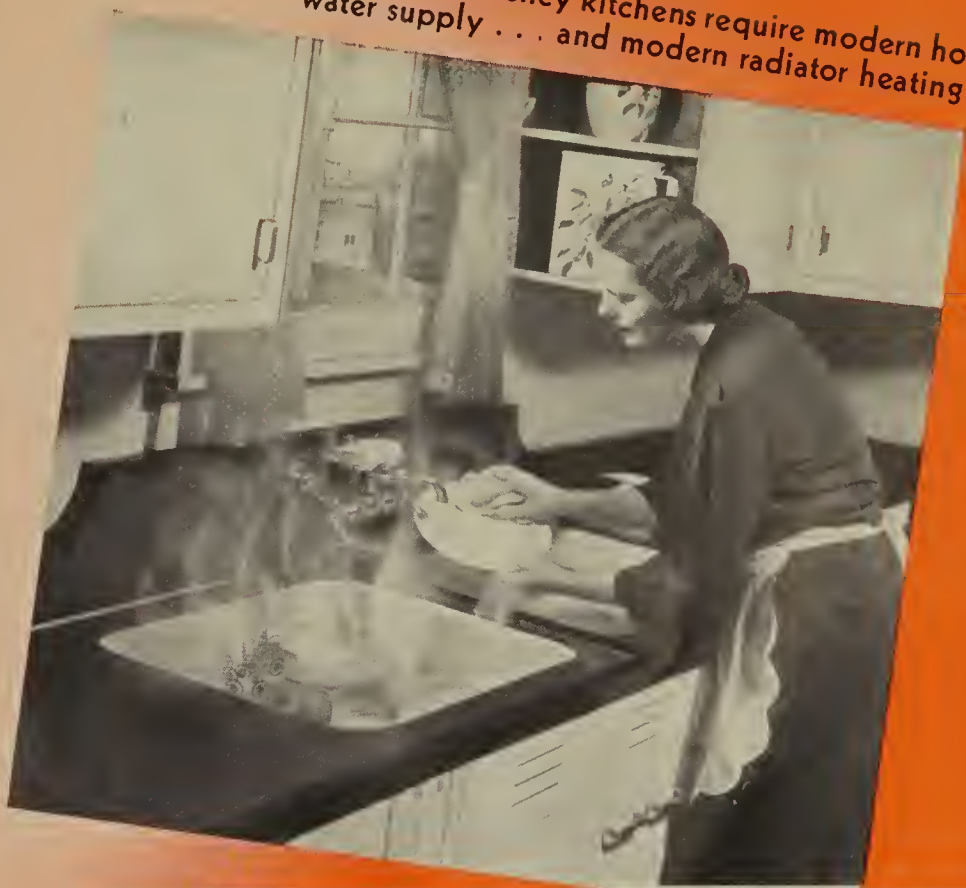
*From One Boiler and One
Fuel—Year Around*

At the turn of a faucet . . . an instantaneous supply of hot water is yours to enjoy . . . from your National Boiler. A small coil built into the rear of the boiler furnishes a supply of hot water that will meet every demand.

Just open the taps for baths or showers . . . “piping hot” water to make dishes sparkle . . . no wait for the early morning shave . . . tubs of hot water for laundry days . . . and there will be no running up and down stairs, as the system is automatic.

The radiator heating boiler provides hot water during the winter from the same fuel and at no extra cost. When automatically fired, the same boiler will provide hot water during the summer months at less cost than other methods. Hence, it is unnecessary to have an auxiliary water heater with radiator heating. National corrosion-proof boilers, radiators, and convectors eliminate maintenance expense. They are long lived.

Modern efficiency kitchens require modern hot water supply . . . and modern radiator heating.

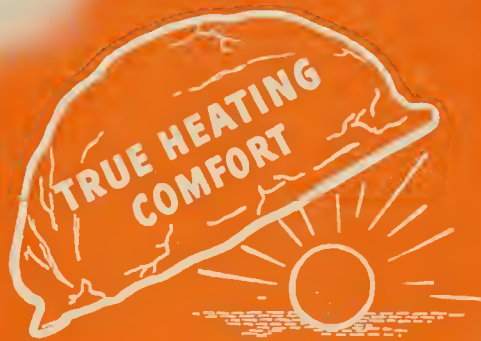


With built-in hot water coils the National Boiler provides an instantaneous supply of hot water for the bathroom.

she has an unlimited supply of steaming hot water.



RADIATOR HEATING EXCELS



The most necessary equipment in the home to provide comfort during the eight-to-nine month winter season is . . . RADIATOR HEATING. At your office, or in a hotel—you may enjoy the comfort of RADIATOR HEATING. It is just as essential in your home!

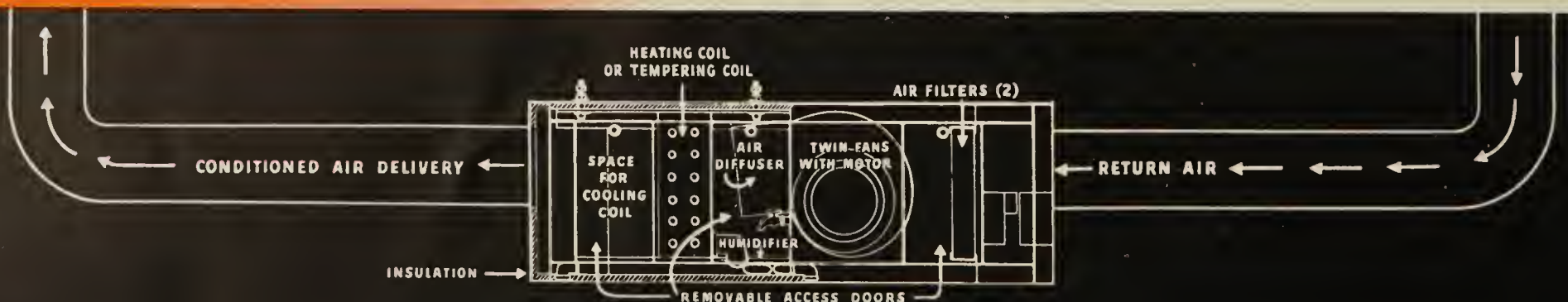
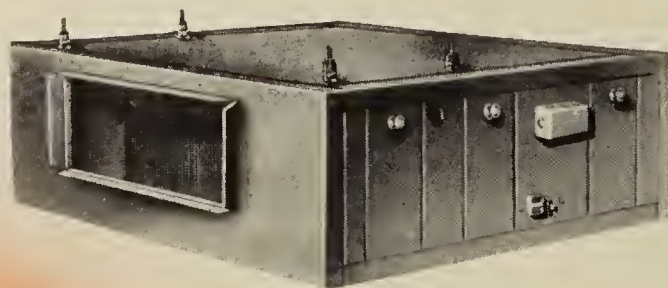
From a construction viewpoint, it is more flexible in placement and easier to install. Small connecting piping or tubing is easily concealed and it will not weaken framing or require excessive cutting for duct chases. Radiators and convectors blend with interiors. Radiator heat is clean; it does not require supplementary air conditioning features. Positive radiator heating insures comfort in the Living Zone.

FOR SMALL OR LARGE HOMES

split system air conditioning may be desired, although it is seldom necessary.

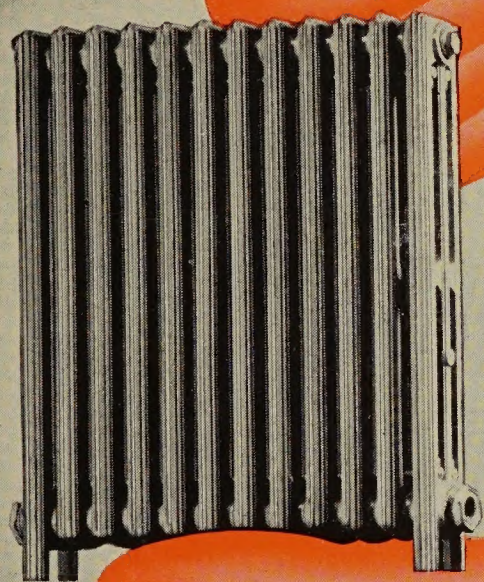
Due to construction features, volumes of air, and spread-out areas of a large home, a split system unit may be desired occasionally to assist in the movement of warmed air, carrying additional moisture. Sometimes the addition of moisture in proper amounts is desirable and will make radiator heat even more comfortable. This basement conditioner does not have the disadvantages of hot air furnaces. The air does not contact extremely hot heating surfaces, nor is it possible for combustion fumes to leak into the air stream. This installation requires a minimum of duct work.

The National Conditioner, with its supplementary conditioning features, may be installed in new or old homes—with the heating installation, or at any future time. Seldom has it been necessary to add this unit to a radiator heating system.



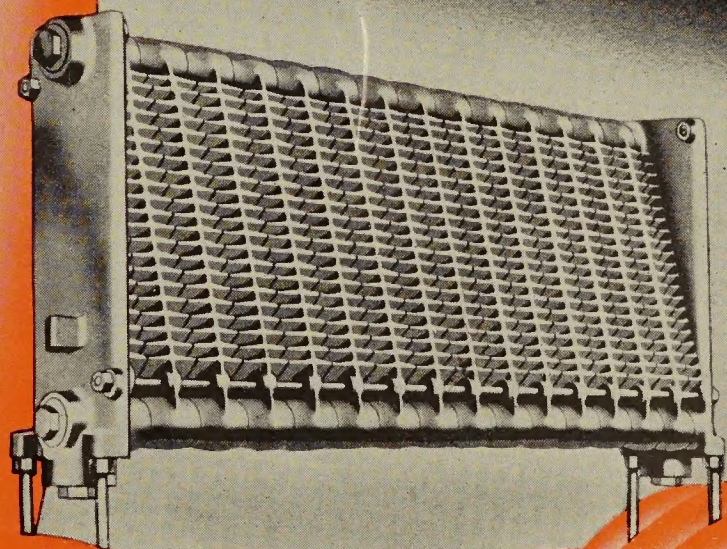
NATIONAL

PRESENTS



KNEE HIGH •

HAND WIDE



RADIATOR

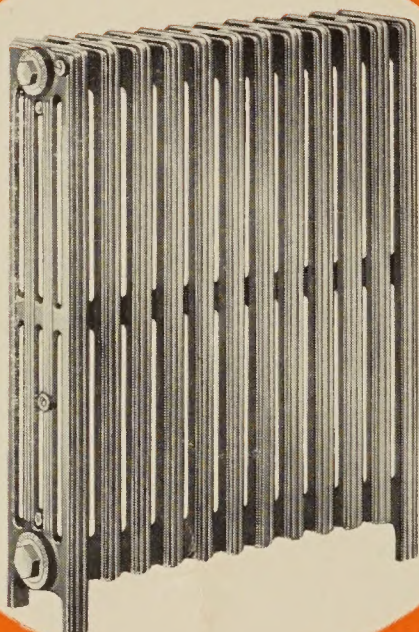
CONVECTORS

*Slenderized
Graceful*

ART RADIATORS



The Art Radiator is painted a soft peach color to match the paneled walls of this attractive dining room.



Radiator heat in bathrooms, garages, bedrooms, and kitchens is more healthful. Radiator heated air carries no recirculated germs from sickrooms or odors from bathrooms and kitchens. It is not overheated and dried out by contact with extremely hot, direct heating surface.

The master bedroom shown below has wallpaper of alternate nine-inch white and gold vertical stripes. The vertical folds of the chiffon velvet draperies carry upward the slenderized motif of the radiators.

Straw-colored broadloom carpet, ivory and gold brocade spreads, and furniture done in ivory and gold, complete the color harmony.



Cinnamon pine paneling, printed linen hangings, the semi-antique oriental rug, and the Art Radiators finished in chocolate brown, all contribute to the quiet elegance of the living room shown above.



Living Zone Comfort

AERO CONVECTORS

Convactor heating provides all of the many advantages of radiator heating. As several types of convectors are obtainable—the principal features to consider are outlined.

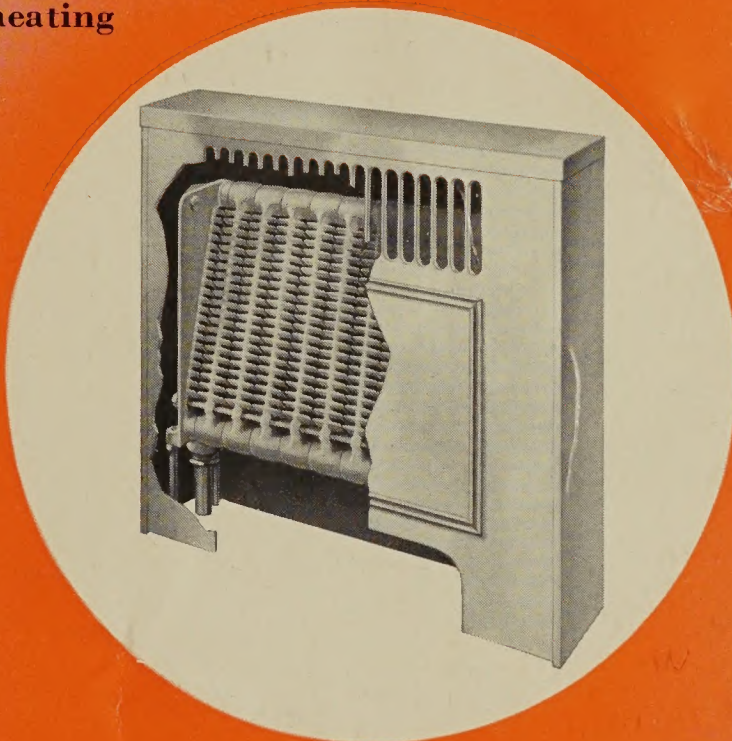
National Convectors are of cast-iron design. They are the only type of convectors which permits "balanced heating" when used with cast-iron radiators. All convectors require approximately the same depth of space under the windows. Some types, however, require longer lengths, to equal the same heating surface of the compact National design.

The vertical-slope section of the National design provides ample heating capacity in a small space. The integrally-cast fins, with hollow heating tubes at top and bottom, permit a large volume of air to pass through the unit, enter the room at low velocity, comfortably warmed, and at the Living Zone. The fins are self-cleaning.

Aero Convectors do not produce a "crackle" noise, due to loose tubes, fins, or the use of two different metals. They cannot become air bound.

Convectors of metals other than cast iron cool off rapidly and require more frequent firing of the boiler, which results in a higher operating cost.

The richness of the mahogany Chippendale furniture, semi-antique oriental rug, and figured linen hangings contrasts pleasingly with the all-white walls and white Aero Enclosures in this 18th Century paneled dining room.



National Aero Convectors have been giving dependable, full-rating heating comfort since 1931. Installations have been made in residences and skyscrapers.

Aero Enclosures are made in a number of different styles, all harmonizing with perfectly appointed interiors.



The cheery, gay guest room above is decorated in pink and ivory. Beneath the sheer net ivory drapes and overdrapes of embroidered net of the same color stands the Aero Enclosure, ready to make its contribution of cheerful warmth to the room.



FOR TRUE HEATING COMFORT

Select the

NATIONAL RADIATOR CONVECTOR SYSTEM

Enjoy the full benefit of true heating comfort with flexible control and positive heating. Safeguard health. Live with the convenient luxury of an ever-available supply of hot water. These features are obtainable only with sunray radiator-convector heating.

This modern service for home comfort is a development of the National Research Laboratories. National research engineers have combined laboratory and field experience. National was the first to standardize on "slenderized" radiators and the first to introduce cast-iron convectors.

This practical experience has matured from the days of the inception of National Radiator Corporation. Starting almost a half-century ago, as a heating contracting shop, it has expanded to a nationwide manufacturing organization with branch offices in principal cities.

NATIONAL RADIATOR CORPORATION

JOHNSTOWN, PA.

Sales Offices in Principal Cities



The Mark

of Quality